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NEW SPECIES OF DOLICHOPODIDAE IN THE U. S. NATIONAL MUSEUM

(DIPTERA)

BY F. C. HARMSTON, *Salt Lake City, Utah*

This report includes descriptions of thirteen apparently undescribed species of Dolichopodidae which were among material submitted to the writer for identification by Dr. Willis W. Wirth, Division of Insect Identification, U. S. National Museum. All of the specimens discussed herein have been returned to Dr. Wirth, and are deposited in the U. S. National Museum.

Dolichopus hirsutitarsis, new species

Male.—Length, 5 mm.; length of wing, 4.5 mm. Face ochreous yellow, broad on upper portion where its width equals the distance between the tips of third and fourth veins, slightly narrowed on lower portion. Front metallic, green, its reflections violet when viewed obliquely. Palpi dark yellow, the anterior surface with black hairs. Antennae black; first segment yellow on lower half; second segment slightly yellow at tip on lower portion; third segment scarcely longer than wide, obtusely pointed, with a thick, densely pubescent arista which is inserted near the apical fourth of the segment. Postocular cilia white, the black cilia descending to about the middle of the eye.

Dorsum of thorax bright green, metallic, the reflections somewhat of a purplish hue when viewed obliquely; pleurae concolorous with dorsum, subshining, lightly dusted with grayish pollen; the black bristles of the prothorax and metanotum exceptionally large and prominent. Abdomen green, metallic, with bronze and purple reflections, lightly dusted with gray pollen. Hypopygium concolorous with the abdomen, the apical half more blackish, overlaid with whitish dust; lamellae yellow, triangular, with jagged and blackened apical margin, fringed with black bristles.

Coxae concolorous with pleurae, the fore pair yellowish on inner portions and at apex; anterior surface of fore coxae clothed with black hairs and with black bristles at the apex; there are a few delicate, pale hairs at the base of fore and middle coxae. Femora and tibiae yellow; middle femora with a single preapical bristle; posterior femora without cilia along the lower, inner edge, but with a row of six prominent bristles of increasing length which end with the large preapical bristle; the tip of the fore tibia bears a delicate, pale bristle on inner side, which is approximately one-half the length of the anterior basitarsus. Fore tarsi of plain structure, black from the tip of the first segment, the comparative lengths of the segments as 12-5-3-2-3; middle tarsi black from the tip of first segment, the first and fifth segments of ordinary structure, the second, third and fourth segments greatly compressed, and with a fringe of short, sharp hair-like bristles on their upper edge, the first segment with a row of short, sharp bristles on the inner and outer sides; comparative length of the segments of middle tarsi as 15-6-5-2-2; posterior tarsi black from the tip of first segment, the comparative length of the segments as 13-13-7-6-5. Calypters and halteres yellow, the former with black cilia.

Wings grayish hyaline; costa with a prominent, knot-like enlargement at the tip of first vein; last section of fourth vein bent sharply forward slightly before its middle; hind margin of wing deeply incised at the tip of fifth vein; anal angle evenly rounded, not prominent.

Female.—Agrees with the male in general coloration; the face is much wider, its pollen silvery; the middle tarsi are of plain structure and the costa is not enlarged at the tip of first vein.

Types.—U. S. N. M. no. 61661. Described from 8 males and 3 females, collected by J. M. Aldrich. Five males and 2 females, which include the holotype male and allotype female, were taken at Klamath River, California, July 11, 1930; 3 males and 1 female were taken at Rowdy Creek, Smith River, California, July 8, 1930.

Dolichopus hirsutitarsis, new species closely resembles *D. aldrichii* (Wheeler), but the two species are readily separable by differences in the structure of the middle tarsi and the wings. In *hirsutitarsis* the second, third and fourth segments of the middle tarsi are greatly compressed, and are approximately as broad as they are long; in *aldrichii* the corresponding tarsal segments are approximately twice as long as they are broad. The anal angle of the wing differs greatly in the two species; in *aldrichii* the anal margin is distinctly bi-lobed, and the anal angle is at a right angle to the costal margin, whereas in *hirsutitarsis* the anal angle is evenly rounded. It may be noted, also, that *aldrichii* has the anterior surface of fore tarsi clothed with delicate, barely perceptible, pale hairs, whereas in *hirsutitarsis* these hairs are black and very prominent.

Dolichopus vegetus, new species

Male.—Length, 5 mm.; length of wing, 5 mm. Face golden brown, as wide as the distance between the tips of third and fourth longitudinal veins. Palpi yellow. Antennae black; first segment yellow on lower half; third segment slightly longer than broad, obtusely pointed; arista inserted near the middle of segment. Lateral and lower postocular cilia white, the upper cilia black.

Dorsum of thorax metallic green, with a prominent median bronze vittum. Pleurae concolorous with the metanotum, sub-shining because of a rather dense covering of gray pollen. Abdomen metallic, green, the apical margins of the segments with bronze reflections; hairs and bristles on the dorsum of abdomen black, the lateral and ventral portions of abdomen with delicate, pale cilia. Hypopygium black; lamellae rather large, with the stem being approximately the same length as posterior basitarsus, of a sordid yellowish color, the apical margin with a broad black border, which is jagged and bristly.

Fore coxae yellow, slightly blackened at the base on outer side; anterior surface with delicate pale cilia on outer half, and minute black cilia on inner half, the bristles at the apex black. Middle and hind coxae black. Femora yellow, the posterior pair blackened at the tip as far as the preapical bristle, and ciliated along lower inner edge with a row of about ten evenly-spaced hairs which appear black in some lights, brownish in others; the longest of these hairs equals the width of the femora. Middle femora with a single preapical bristle. Fore and middle tibiae yellow, the latter nearly one and one-half times the length of middle femora; posterior tibiae wholly black, noticeably enlarged and compressed, the inner surface glabrous, the outer surface with numerous prominent black bristles. Fore tarsi yellow, the last two segments black; middle tarsi blackened from the tip of the first segment, which bears a prominent black bristle on the upper surface slightly beyond the middle; posterior tarsi wholly black, the first segment very prominent, approximately one-half the length of the femora. Comparative length of the segments of fore tarsi at 15-10-7-6-5; of middle tarsi as 20-10-8-6-6; of posterior tarsi as 20-15-10-8-6. Calypters and halteres yellow, the former with black cilia.

Wings grayish, tinged with brown in front of the fourth vein; costa with an elongated, knot-like enlargement at the tip of the first vein; last section of fourth vein bent forward slightly before its middle; anal angle evenly rounded, not prominent.

Female.—Similar to the male in coloration of body and legs; face much wider and with silvery pollen; posterior femora without cilia along the lower, inner edge; fore coxae with prominent black hairs over the entire anterior surface.

Types.—U. S. N. M. no. 61662. Described from 9 males and 7 females taken in Mt. McKinley National Park, Alaska, in 1932, by F. W. Morand.

Dolichopus vegetus, new species, is similar in many respects to *D. pensus* Aldrich, which also was described from Alaska. Both species are alike in having yellow femora, and black posterior tibiae. *D. pensus* lacks the cilia along the lower, inner edge of posterior femora, and has calypters with white cilia, whereas in *vegetus* the calypters are fringed with black cilia, and the posterior femora are fringed with long hairs along the lower, inner edge.

***Dolichopus divigatus*, new species**

Male.—Length, 4.5 mm.; length of wing, 4.2 mm. Face golden pollinose, but appearing somewhat grayish-brown in certain lights, rather narrow, particularly on lower portion, where its width equals the width of middle tibia. Front blue, metallic. Antennae black; third segment slightly longer than wide, rounded at tip. Lateral and lower postocular cilia white. Palpi yellow.

Dorsum of thorax green, metallic, with bronze reflections; pleurae green, dulled with white pollen. Abdomen green, metallic, the posterior margins of the segments darker, and with bronze reflections. Hypopygium black; lamellae brown, oval, very large and prominent, equaling the length of middle basitarsus, the apex truncate, jagged and bristly.

Fore coxae yellow, the basal one-fourth blackened on outer surface, the anterior surface with prominent black hairs. Middle and hind coxae black. Femora yellow, the posterior pair blackened at tip as far as the preapical bristle; middle and posterior femora each with two preapical bristles, the latter without cilia along the lower, inner edge. Tibiae yellow, the posterior pair narrowly, but distinctly, blackened at tip. Fore and middle tarsi black from the tip of first segment; middle basitarsus without a bristle on upper surface; posterior tarsi wholly black. The comparative length of the segments of fore tarsi as 10-5-5-4-4; of middle tarsi as 16-8-7-5-5; of posterior tarsi as 15-15-10-7-5. Calypters and halteres yellow, the former with black cilia.

Wings grayish; costa without enlargement at the tip of first vein; last section of fourth vein bent slightly forward just before its middle; anal angle evenly rounded, prominent.

Type.—U. S. N. M. no. 61663. Described from one male taken at Mt. Hood Meadows, Mt. Hood, Oregon, July 13, 1932, by J. M. Aldrich.

Dolichopus divigatus, new species, resembles both *D. apheles* Van Duzee and *D. affluens* Van Duzee in general appearance and coloration, but the two latter species possess a single preapical bristle on middle and posterior femora. *Dolichopus apheles* M. & B. also is similar to *D. divigatus* in coloration and size, but it likewise possesses a single preapical bristle on middle and hind femora, and the hypopygial lamellae are much smaller and of different shape.

***Hercostomus indianus*, new species**

Male.—Length, 2.5 mm.; length of wing, 3 mm. Face silvery pollinose, narrow, particularly in the middle, where the eyes are nearly contiguous. Front gray-pollinose. Palpi concolorous with the face. Antennae yellow; third segment brown on the apical half, slightly longer than wide, obtusely pointed, pubescent. Arista arising from the middle of third segment, approximately three times the length of antenna, pubescent. Postocular cilia white.

Dorsum of thorax metallic, green, lightly grayish pollinose, the lateral portions brown; scutellum concolorous with metanotum, with one pair of very prominent marginal bristles and minute pale cilia along the margin; bristles of the thorax strong, black; pleurae yellowish-brown, lightly grayish pollinose, a conspicuous black spot below and near the base of calypters. Abdomen green, metallic, grayish pollinose, the venter and the anterior two thirds of the first segment yellow, the hairs and bristles brown, appearing pale in some lights. Hypopygium yellow; inner organs shining black, the outer lamellae yellow, triangular, the apical margin truncate, fringed along margins with delicate pale hairs.

Coxae and legs yellow, with only the extreme apices of all tarsi but slightly infuscated. Anterior surfaces of the fore and middle coxae with delicate pale hairs, the bristles at tips brownish; outer surface of middle and hind coxae with a prominent black bristle. Anterior tibiae with a row of strong, closely-spaced, black bristles which are of approximately the same length as the width of tibia; middle and posterior femora each with a single preapical bristle. Halteres and calypters yellow, the latter with pale cilia which appear brownish in some lights.

Wings grayish hyaline, veins yellow; third and fourth veins slightly converging toward their tips; wings broadly rounded at apex; cross-vein situated well before the middle of wing, its length is slightly less than one third the length of the last portion of fifth vein; anal angle evenly rounded toward the root of the wing.

Female.—Similar to the male in coloration of body and legs. The face is much wider, its width equaling the distance between the tips of the third and fourth veins.

Types.—U. S. N. M. no. 61664. Described from 4 males and 3 females collected at La Fayette, Indiana, July 4, 1916, by J. M. Aldrich.

Hercostomus indianus new species traces to *H. minutus* (Loew), in the table of species presented by Curran, American Museum Novitate, No. 682, 1933, but the latter species possesses wholly black postocular cilia which will readily distinguish it from *indianus*. No other species of *Hercostomus* known to the writer display the sharply contrasting colors evident in the case of *indianus*, which has the dorsum of the abdomen green and the pleurae and hypopygium pale yellowish.

***Hercostomus coloradensis*, new species**

Male.—Length, 3 mm.; length of wing the same. Face silvery pollinose, rather wide, its width equalling the distance between the tips of the third and fourth longitudinal veins. Front concolorous with the face. Postocular cilia black. Antennae black; third segment slightly longer than wide, evenly rounded on lower portion. Arista inserted near the middle of third segment. Palpi brown.

Dorsum of thorax dark-green, sub-metallic, whitish pollinose; pleurae of a dull greenish color, pollinose. Abdomen concolorous with the metanotum, the lateral portions and the venter dulled with white pollen. Hypopygium black, whitish pollinose; outer lamellae yellow, ribbon-like, their length equaling that of the anterior tibia, tapering to a point, the sides jagged and fringed with long, yellow cilia.

Fore coxae yellow, their anterior surface clothed with delicate black hairs, the bristles at the tip long and black; middle and posterior coxae concolorous with pleurae, their tips yellowish. Femora, tibiae and tarsi yellow; posterior femora blackened on apical one-third; middle and posterior femora each with a single preapical bristle; anterior tibiae without a row of bristles along the anterior, outer edge; posterior tibiae brownish on apical one-fourth. Fore tarsi with first three segments yellow, slender, laterally compressed, their combined length equalling the length of fore tibia; fourth and fifth segments black, conspicuously flattened; comparative length of the segments of fore tarsi as 14-11-11-4-4; middle tarsal segments of plain structure, their comparative lengths as 22-13-11-6-5; posterior tarsi brownish, the comparative length of the segments as 15-15-11-6-5. Calypters and halteres yellow, the former with black cilia.

Wings grayish hyaline; third and fourth veins convergent on last portions, their tips separated by a distance equal to the width of middle tibia; anal angle evenly rounded.

Female.—Coloration as in the male. The face is much wider; the fore tarsi are of plain structure.

Types.—U. S. N. M. no. 61665. Described from 3 males and 4 females collected at Boulder, Colorado, by J. M. Aldrich. Date of collection not indicated on the labels.

Hercostomus coloradensis, new species is readily distinguishable by the peculiar structure of the fore tarsi, together with the elongate, ribbon-like, tapering hypopygial lamellae.

***Hercostomus orbicularis*, new species**

Male.—Length, 3 mm.; length of wing the same. Face silvery pollinose, its width equaling the width of the third antennal segment. Front concolorous with the face. Postocular cilia black. Palpi black. Antennae yellow; third segment brownish on apical half, elongate-oval, slightly longer than wide, rounded at tip.

Dorsum of thorax metallic, dark green, lightly dusted with white pollen; pleurae appearing gray, the surface with dense coating of gray

pollen. Abdomen concolorous with the metanotum. Apical half of the hypopygium yellow, the basal half black; outer lamellae yellow, the apical margin broadly blackened, basal half of the lamellae narrow, the apical half expanded, somewhat spoon-shaped, rounded at the apex, fringed with long yellow hairs; length of lamellae equal to the length of second segment of middle tarsi.

Coxae and all of legs yellow; anterior surface of fore and middle coxae with black hairs; outer surface of posterior coxae with a prominent black bristle. Tarsi of plain structure, the comparative length of the fore tarsal segments as 12-6-5-4-3; of middle tarsi as 16-12-9-5-4; of posterior tarsi as 12-12-9-6-5. Calypters and halteres yellow, the former with black cilia.

Wings grayish hyaline, with a prominent, jet-black, apical spot; this spot begins at the tip of the second vein and extends a considerable distance below the tip of fourth vein; posterior cross-vein situated before the middle of the wing; apical portions of third and fourth veins parallel; anal angle evenly rounded.

Female.—Similar to the male in coloration. The face is much wider, its width equalling the length of posterior cross-vein; third antennal segment shorter than in the male, being as broad as long; the wings lack the prominent jet-black apical spot, yet they are distinctly brownish on the apical one-fourth.

Types.—U. S. N. M. no. 61666. Described from 4 males and 11 females, collected in Mill Creek Canyon, San Bernardino Mountains, California, June 9, 1924, by J. M. Aldrich.

The prominent, round, jet-black apical spot of the wings readily distinguishes *orbicularis*, new species from other known members of *Hercostomus*.

***Hercostomus consanguineus*, new species**

Male.—Length, 3 mm.; length of wing, 2.5 mm. Face brown, rather wide, the lower portion narrowed, equalling the width of posterior tibia. Front sub-shining, lightly dusted with brownish pollen. Palpi black. Postocular cilia black. Antennae black; third segment as broad as long, rounded below, obtusely pointed.

Dorsum of thorax dark green, its reflections blackish, almost devoid of pollen; scutellum concolorous with the metanotum, with a single pair of large marginal bristles, the upper surface with delicate black hairs; pleurae sub-shining, with dense layer of graying pollen. Abdomen concolorous with the metanotum, metallic, its reflections of a dark greenish hue. Hypopygium black; lamellae black, crescent-shaped, of nearly equal width throughout, the apex rounded, the outer margin jagged and with bristly, black hairs; the lamellae are as long as the second segment of middle tarsi.

Coxae black; anterior surface of fore and middle pairs clothed with black hairs and bristles. Femora and tibiae yellow; tarsi darkened from the tip of first segment; middle and hind femora each with a single pre-

apical bristle. Comparative length of the segments of fore tarsi as 12-5-4-3-3; of middle tarsi as 15-7-6-5-4; of posterior tarsi as 12-13-8-7-5. Calypters and halteres yellow, the former with black cilia.

Wings grayish hyaline; apical portions of third and fourth veins parallel; anal angle evenly rounded, not prominent.

Types.—U. S. N. M. no. 61667. Described from 2 males collected at Olympia, Washington; one taken June 3, 1895, the other June 28, 1896, both collections made by Kincaid.

Hercostomus consanguineus, new species resembles *H. chalcocrus* (Loew) in general appearance. Both species have the coxae wholly black, the remainder of legs yellow. In *consanguineus* the hypopygial lamellae are of equal width throughout and are rounded at apex; the lamellae of *chalcocrus* are widest at the middle, from which point they taper to a sharp point. *H. chalcocrus* possesses a row of three to four evenly-spaced, long black hairs on the lower edge of the basal portion of middle femora; the middle femora of *consanguineus* are without such hairs.

Asyndetus scopiferus, new species

Male.—Length, 2.5 mm. Face and front silvery pollinose, of approximately equal width, the latter equalling the length of second segment of middle tarsi. Lateral and inferior postocular cilia, and the whiskers, white. Antennae black; third segment broader than long, rounded at tip; second segment overlapping the third a short distance on the inner side. Arista dorsal, inserted near the base of third segment. Palpi black, the anterior surface with thin white pollen and stiff black hairs, which are longer than the palps.

Dorsum of thorax metallic, bronze-green, lightly dusted with white pollen. Abdomen metallic, bronze-green; reflections more of a bluish hue in certain lights; hairs of the abdomen black; two pairs of prominent black bristles at the tip of abdomen. Hypopygium small, black; lamellae minute, each bearing three small, white bristles at tip.

Coxae and legs wholly black. Fore and middle coxae with black hairs on anterior surface. Fore femora with a row of long, black bristles on the outer lower surface, which are as long as the width of femora, and numerous shorter bristles on the lower surface; middle femora nearly glabrous on lower surface, but with a single, short, blunt spine situated near the basal third; posterior femora with a row of long, slender bristles on the outer surface of the basal half, and with several prominent bristles along the lower edge. Tibiae bristly; posterior pair noticeably enlarged. Segments of fore tarsi with dense, short, stiff bristles on outer surfaces, which are as long as the width of the tarsal segments; anterior pulvilli slightly longer than the fifth segment, which bears several prominent black bristles at its tip; middle tarsi of plain structure; first segment of posterior tarsi with a prominent black spine near the base and another at the tip on lower surface; third segment with a long black bristle at tip on upper surface; fourth segment with two

long bristles on the upper surface, one of which arises near the middle of the segment is curved, scimitar-like, the other arising near the tip of the segment is straight; both bristles are approximately twice the length of the fourth segment; fifth segment of peculiar structure, its outer apical margin extending beyond the inner margin and terminating in four stiff bristles, which present a somewhat hand-like appearance. Comparative length of the segments of fore tarsi as 10-5-4-3-2; of middle tarsi as 12-6-5-4-4; of posterior tarsi as 9-9-5-4-4. Calypters and halteres white, the former with white cilia.

Wings grayish hyaline; costa ending at the tip of third vein; the very thin fourth vein is broken opposite the tip of third vein; anal angle prominent, at nearly a right angle to the costal margin.

Types.—U. S. N. M. no. 61668. Described from 2 males taken at Hood River, Oregon, July 14, 1932, by J. M. Aldrich.

The peculiar structure and chaetoxaxy of the posterior tarsi readily distinguish *scopiferus*, new species from other known species of *Asyndetus*.

***Chrysotus kansensis*, new species**

Male.—Length, 2 mm. Face silvery pollinose, narrowed on lower portion, the eyes contiguous. Front green, metallic. Palpi white, equalling the length of the third segment of fore tarsi. Lateral and lower post-ocular cilia white. Antennae black; third segment reniform, with a slight point below the insertion of the arista.

Thorax and abdomen metallic, green, their hairs and bristles black. Coxae, femora, hind tibiae and hind tarsi black; trochanters and the fore and middle tibiae yellow; fore and middle tarsi blackened from the tip of third segment. Lower edge of hind femora with a row of black, hair-like bristles whose length equals the width of femora; hind tibiae ciliated on outer surface with long black hairs which are approximately twice as long as the width of tibia, and with a brush of long hairs on the lower side near the tip. Hind basitarsus appears slightly swollen below near the middle, its lower surface densely ciliated with black hairs which are longer than the width of basitarsus. Halteres, calypters and their cilia, yellow.

Wings grayish hyaline; third and fourth veins parallel on last portion.

Female.—Similar to the male except that the palpi are black, lightly dusted with silvery pollen; the hind tibiae and tarsi are yellow; the face is wider than in the male, its width equalling the distance between the tips of third and fourth veins.

Types.—U. S. N. M. no. 61669. Described from 2 males and 5 females collected at Lawrence, Kansas, by J. M. Aldrich. Date of collection is not shown on the labels.

Chrysotus kansensis, new species strongly resembles *C. hirtipes* Van Duzee. The two species differ, however, in the form of the third segment of the antennae, and in the chaetotaxy of posterior basitarsus. In the case of *hirtipes* the third segment

of antennae is elongate-triangular, equalling the length of the third segment of hind tarsi, oblique on upper edge, with a slight notch for the insertion of the arista; in *kansensis* the third segment of antennae is less than one-third the length of third segment of posterior tarsi, reniform, the lower edge rounded and of slightly more prominence than the upper edge. Both species have the posterior basitarsus swollen on the lower surface near its middle; in *kansensis* the hairs arising from the swollen area are considerably longer than the width of basitarsus; in *hirtipes* the corresponding hairs are shorter than the width of basitarsus.

***Chrysotus dakotensis*, new species**

Male.—Length, 1.6 mm.; length of wing, 1.5 mm. Face lightly dusted with silvery pollen, the bluish ground color perceptible on upper portion, the lower portion narrowed so that the eyes are contiguous. Front metallic, green. Palpi yellow. Lateral and lower postocular cilia white. Antennae black; third segment as broad as long, its length equalling the length of third segment of posterior tarsi, the upper edge oblique. Arista sub-apical, inserted slightly before the tip of third segment.

Dorsum of thorax and the scutellum green, metallic, the reflections bronze in some lights, their bristles black; pleurae lightly dusted with gray pollen. Abdomen metallic, green, with bronze reflections, its bristles and hairs black. Hypopygium black, embedded, the outer lamellae short, blunt, each as long as the third segment of fore tarsi, fringed with delicate pale hairs. Halteres, calypters and their cilia, yellow.

Coxae, femora, posterior tibiae and their tarsi black with green reflections. Fore coxae with black hairs and bristles on anterior surface; posterior femora with a row of prominent black bristles along lower edge, whose length equals the width of femora; posterior tibiae laterally compressed, their outer surface clothed with long black hairs which are as long as the width of tibia, and with a brush of hair below on the apical third; the long hairs on the outer surface of the posterior tibia are continued on the outer surface of the posterior basitarsus. Fore and middle tibiae yellow; fore and hind tarsi blackened from the tip of first segment. Comparative length of the segments of fore tarsi as 10-4-3-3-3; of middle tarsi as 13-5-4-3-3; of hind tarsi as 10-5-4-3-3.

Wings grayish hyaline; veins brown.

Types.—U. S. N. M. no. 61670. Described from 3 males collected in South Dakota, by J. M. Aldrich. No date is shown on the labels. The holotype male is labelled Brookings, South Dakota; the two paratype males are labelled "S. D."

Chrysotus dakotensis, new species closely resembles *C. tibialis* Van Duzee in the structure of the antennae and in the chaetotaxy of the hind tibiae and tarsi. However, in *tibialis* the fore and middle tibiae and the palpi are wholly black. In both species the hairs and bristles on anterior surface of fore coxae are black.

Syntormon variegatum, new species

Male.—Length, 3 mm. Face silvery pollinose, narrow, the lower portion equalling the width of the middle basitarsus. Front metallic, blue-green. Antennae black; first segment expanded laterally towards its tip; second segment overlapping the third segment to near its middle on the inner side; third segment triangular, evenly tapered on the upper and lower edges, ending in a sharp tip, its length equalling the length of posterior basitarsus. Arista sub-apical, equalling the length of third segment. Lateral and lower postocular cilia white. Palpi black.

Dorsum of thorax bronze, dulled with gray pollen; pleurae concolorous with metanotum, but the pollen much heavier. Abdomen concolorous with metanotum, with greenish reflections in certain lights. Hypopygium embedded, the external lamellae yellowish-brown, with delicate pale cilia.

Coxae, femora and tibiae yellow. Anterior surface of fore and middle coxae with delicate pale hairs, and with a few black bristles near their tips. Fore tibiae with a row of closely-spaced, sharp black bristles along inner edge; middle tibiae with a row of about ten evenly-spaced black bristles on the lower edge, which are longer near the base of tibia and decrease in length as they approach the apex. Posterior tibiae narrow on the basal four-fifths, the apical fifth greatly swollen and blackened, and bearing a number of prominent black bristles. Fore tarsi black from the base of third segment; middle tarsi with first segment whitish, the remaining segments black; second, third and fourth segments laterally compressed, their upper and lower edges fringed with short, black hairs, each of these segments being as broad as long; fifth segment narrow, forming a pointed tip to the tarsi; posterior tarsi blackened from near the base of second segment; posterior basitarsus with a long, bisinuate bristle on lower surface, a shorter, straight bristle on outer side near the base of the larger bristle, and several stiff, black hairs on the posterior surface. Segments of the fore tarsi as 15-6-5-4-4; of middle tarsi as 16-5-5-4-4; of posterior tarsi as 8-8-7-4-4. Halteres yellow; calypters yellow with narrow brownish margin, their cilia pale.

Wings grayish hyaline; last section of fifth vein slightly longer than the cross-vein; anal angle evenly rounded, not prominent.

Type.—U. S. N. M. no. 61671. Described from one male taken at Smith River, California, July 21, 1932, by J. M. Aldrich.

Syntormon variegatum, new species may be distinguished from the other *Syntormon* having the middle tarsi conspicuously widened, by means of the following key:

1. Some of the segments of both middle and posterior tarsi conspicuously widened *ornatipes* Van Duzee
 Only the middle tarsi with some segments conspicuously widened.... 2
2. Posterior tibiae wholly yellow; segments of middle tarsi depressed dorso-ventrally *utahensis* H. & K.
 Posterior tibiae darkened at tip; segments of middle tarsi compressed laterally 3

3. Second segment of middle tarsi wholly white in color..... *palmare* Loew
 At least the apical half of second segment of middle tarsi black.... 4
4. Second segment of middle tarsi blackened only on the apical half;
 second and third segments but slightly widened; last four seg-
 ments of posterior tarsi clothed with black hairs on upper sur-
 face *kennedyi* H. & K.
- Second segment of middle tarsi wholly black; second, third and
 fourth segments greatly compressed, as broad as long; entire
 upper surface of last four segments of posterior tarsi clothed
 with delicate pale cilia *variegatum*, new species

***Aphrosylus californicus*, new species**

Male.—Length, 1.5 mm.; length of wing, 2.2 mm. Face velvety black, appearing somewhat grayish when viewed obliquely, its width equals the width of the base of posterior femur. Front black, the dark green ground color barely perceptible. Antennae black; first segment widened apically; second segment short, spheroidal, with a few black bristles on apical margin; third segment elongate-triangular, approximately twice as long as the width at base. Arista apical, tapering rapidly, approximately two times the length of third antennal segment. Postocular cilia wholly black. Palpi black.

Body and legs wholly black, sub-metallic, lightly dusted with grayish pollen. Metanotum with two rows of dorsocentral bristles, each row containing six prominent bristles; acrostical bristles extremely minute, in a single row; two extremely prominent bristles on the margin of scutellum, and a single pair of delicate hairs situated outside the larger bristles. Hypopygium black; lamellae broad at base, expanded upward to form a broad, leaf-like structure, rounded at apex, from which extends a long, cylindrical projection which is expanded at tip, bearing numerous long, delicate, brownish hairs.

Fore coxae with short black hairs on anterior surface; middle coxae with black hairs on anterior surface near the tip. Fore and middle femora with delicate black hairs on lower surface, these being rather inconspicuous, their length being only about one-half the width of femora; posterior femora with a row of slender, black hair-like bristles on the apical half, on inner and outer edges; these slender bristles are nearly three times as long as the width of femora; tibiae and tarsi of plain structure, without noticeable hairs or bristles; tarsi of plain structure, the apical segments somewhat flattened. Comparative length of the segments of fore tarsi as 10-5-5-4-4; of middle tarsi as 13-7-5-4-4; of posterior tarsi as 10-10-7-5-5. Halteres and calypters yellowish-brown, the latter with black cilia which appear brownish in certain lights.

Wings dark gray, rather opaque, without any trace of darker clouds on the veins; last section of fifth vein slightly longer than the posterior crossvein; anal angle evenly rounded, not prominent.

Female.—Similar to the male in coloration of body and legs. The face is much wider, being about twice the width of posterior femur; posterior

femora without long hair-like bristles on lower edges; knobs of halteres darker than in the male.

Types.—U. S. N. M. no. 61672. Described from 9 males and 8 females collected at Laguna, California, August 1, 1932, by J. M. Aldrich.

Aphrosylus californicus, new species may be distinguished from other members of the genus by its small size and the presence of long, slender bristles along the lower edges of posterior femora. It resembles *A. wirthi* H. in general appearance, but the latter species has the second, third and fourth longitudinal veins greatly broadened, whereas in *californicus* the corresponding veins are slender, of plain structure.

***Hercostomus flagellatus*, new species**

Male.—Length, 3.8 mm.; length of wing, 4 mm. Face slightly wider than the width of posterior tibia, silvery pollinose. Front metallic, violet, lightly dusted with gray pollen. Lateral and lower postocular cilia white. Antennae black; first segment yellowish on lower portion; third segment slightly longer than broad, evenly rounded on lower portion. Arista inserted just before the tip of segment, equally the length of fore tibia, thickened on basal portion, very thin on apical half, and bearing a very conspicuous lamella at the apex.

Dorsum of thorax, scutellum and the pleurae dusted with gray pollen which partly obscures the blue-green ground color. Abdomen metallic, violet, the incisures with greenish reflections, the lateral portions densely grayish pollinose. Hypopygium black, with green reflections; lamellae black, short, round at apex; from the extreme base there arises a long, tapering, ribbon-like appendage which projects upward; this appendage equals the length of the second segment of posterior tarsi, and is fringed on the margins with delicate black hairs.

Coxae black with yellow tips; anterior surface of fore and middle coxae with black hairs and bristles. Femora and tibiae yellow; posterior femora black at tip on upper edge; middle and posterior femora each with a single preapical bristle. Tarsi black from the tip of first segment. Comparative length of the segments of fore tarsi as 10-3-2-2-3; of middle tarsi as 16-12-8 (last two segments missing); of posterior tarsi as 10-14 (last three segments missing). Halteres and calypters yellow, the latter with black cilia.

Wings grayish hyaline; veins black; last section of fourth vein bent forward slightly beyond the middle; this bend is rounded, from which point the vein extends obliquely forward to end slightly behind the tip of third vein; posterior cross-vein slightly longer than the last section of fifth vein; anal angle gradually and evenly rounded toward the root of wing.

Type.—U. S. N. M. no. 61673. Described from one male collected at Mobile, Alabama, April 2, 1924. The specimen was collected in the hold of a ship, containing a cargo of bananas

from Panama. The specimen is labelled "Mobile, No. 1984."

The prominent lamella at tip of arista, together with the long prolongation arising from near the base of the hypopygial lamella will readily distinguish *flagellatus*, new species from the known species of *Hercostomus*. This species has been assigned to the genus *Hercostomus* despite the fact that the curvature of the last section of the fourth vein resembles that of certain species of *Paraclius*.

MECYNOTHRIPS SNODGRASSI, A NEW THRIPS FROM THE SOLOMON ISLANDS

(THYSANOPTERA)

By J. DOUGLAS HOOD, Cornell University, Ithaca, N. Y.

Everyone who has taken a college course in insect anatomy knows of the work of R. E. Snodgrass. If the student's contact with the subject fired a permanent interest, he has used Snodgrass's papers as a pattern for his own, because of their objectiveness and thoroughness, and the inimitable drawings with which they are always so generously illustrated. Perhaps Mr. Snodgrass is our greatest living American entomologist. Such at least is my own opinion, borne out by the number of honorary memberships which have been accorded him by the entomological societies of the world.

Some time ago I mentioned to him that I had long intended to name a new species after him—an empty honor to the recipient, of course, but always a source of satisfaction to the describer himself—but that I had not been able to turn up one of sufficient stature. The present species meets this specification quite well, for it is a veritable giant among thrips, measuring nearly a half inch in length.

Mecynothrips snodgrassi, new species

Figs. 1-9, 12-14

Male (macropterous).—Length about 10.3 mm. (fully distended, 12.22 mm.). Color nearly black, with red internal pigmentation showing through membranous areas and through pale areas of the integument at the lateral margins of abdominal segments II-VII in front of middle; all coxae, trochanters, and femora about concolorous with body; all tarsi yellow, with the usual dark cups, the fore pair brownish; fore tibiae broadly yellow along the morphologically inner and outer surfaces nearly to base, the upper and lower surfaces and the base blackish brown; middle and hind tibiae pale yellow in distal half and dark yellow in narrowed basal sixth, blackish brown between; antennae about concolorous with head in segments I, II, VII, and VIII, I yellowish basally and II apically, the intermediate segments yellow basally and blackish brown apically; III lightly shaded in basal two-thirds, dark